Comparisons Between LTCP and Table A

Location/ Waterbody	LTCP Cost Year	Table A Midpoint of Construction Year	Normalized Year	Escalation Factor	Original LTCP Capital Costs + 26% ($M)	Normalized LTCP Capital Costs + 26% ($M)	Original Table A Total Cost minus Encumbered Cost ($M)	Normalized Table A Total Cost minus Encumbered Cost ($M)	Original Table A Total Cost ($M)	Normalized Table A Total Cost ($M)	Normalized Capital Cost Difference: Table A minus LTCP + 26% ($M)	% Higher Cost (normalized Table A cost compared to normalized LTCP cost + 26%)	LTCP Capital Cost Details	Table A Capital Cost Details	Cost Notes	Additional Notes
Alley Creek and Little Neck Bay	2013	2023	2018	3.25%	$ 9.6	$ 11.2	$ 11.0	$ 9.4	$ 13.0	$ 11.1	$ (0.2)	-1%	Total project cost includes the capital cost of the project, including construction, engineering and other project development costs	Based on Portfolio Manager costs which differed slighly from approved LTCPs. Costs include Design, Contruction Management, and Construction	--	--
Bergen & Thurston Basins	TBD	TBD	2018	3.25%	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	--	--	--	--
Bronx River	2015	2025	2018	3.25%	$ 138.7	$ 152.7	$ 185.0	$ 147.9	$ 185.0	$ 147.9	$ (4.8)	-3%	Site acquisition costs are not included	Based on Portfolio Manager costs which differed slighly from approved LTCPs. Costs include Design, Contruction Management, and Construction	--	--
Coney Island Creek	2016	N/A	2018	3.25%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	--	--	--	No Additonal Projects
Flushing Bay[2]	2016	2031	2018	3.25%	$ 844.2	$ 900.0	$ 1,241.0	$ 818.8	$ 1,241.0	$ 818.8	$ (81.1)	-9%	Design, construction management and land acquisition costs are not included in the cost estimates	Based on Portfolio Manager costs which differed slighly from approved LTCPs. Costs include Design, Contruction Management, and Construction	--	Table A does not identify location of 25 MG CSO storage tunnel (Ingraham's Mountain or Luyster Creek). LTCP preferred alternative #7a (Ingraham's Mountain location) was used for comparison to the Table A costs.
Flushing Creek	2014	2024	2018	3.25%	$ 8.7	$ 9.9	$ 38.0	$ 31.4	$ 46.0	$ 38.0	$ 28.1	285%	Costs for Alternative 3 include all of the facilities and support systems required to implement tank disinfection at outfall TI-010 plus disinfection at the TI-011 outfall	Based on Portfolio Manager costs which differed slighly from approved LTCPs. Costs include Design, Contruction Management, and Construction	Significant differences between LTCP and Table A costs	Unable to find a match from the alternatives described in the LTCP for the project description in Table A. No mention of floatables control/baffles as part of any of the listed alternatives. LTCP Preferred Alternative (#3) description: "TI-010 Outfall Disinfection at Tank and Diversion Chamber 5 plus TI-011 Outfall Disinfection" Table A Project description: "Floatables Control (Baffles) at Diversion Chamber 3 (Outfall TI-010) and Regulator TI-09 (Outfall TI-011)"
Gowanus Canal[1]	2015	2024	2018	3.25%	$ 1,009.3	$ 1,110.9	$ 855.0	$ 705.7	$ 934.0	$ 770.9	$ (340.0)	-31%	Appear to be construction costs only	Costs include Design, Contruction Management, and Construction	--	LTCP preferred alternative #1 (8 MG Tank at Outfall RH-034 and 4 MG Tank at Outfall OH-007) was used for comparison to the Table A costs
	2015	2024	2018	3.25%	$ 835.4	$ 919.5	$ 855.0	$ 705.7	$ 934.0	$ 770.9	$ (148.6)	-16%	Appear to be construction costs only	Costs include Design, Contruction Management, and Construction	--	LTCP preferred alternative #2 (5.7 MG Tank at Outfall RH-034 and 2.5 MG Tank at Outfall OH-007) was used for comparison to the Table A costs
	2015	2024	2018	3.25%	$ 621.2	$ 683.7	$ 855.0	$ 705.7	$ 934.0	$ 770.9	$ 87.2	13%	Appear to be construction costs only	Costs include Design, Contruction Management, and Construction	--	LTCP preferred alternative #3 (3.5 MG Tank at Outfall RH-034 and 1.4 MG Tank at Outfall OH-007) was used for comparison to the Table A costs
Hutchinson River	2014	2028	2018	3.25%	$ 113.4	$ 128.9	$ 167.0	$ 121.3	$ 167.0	$ 121.3	$ (7.6)	-6%	Appear to be construction costs only	Based on Portfolio Manager costs which differed slighly from approved LTCPs. Costs include Design, Contruction Management, and Construction	--	Unclear if preferred alternative from LTCP matches Table A project. No mention of disinfection in Table A project description. LTCP Preferred Alternative (#12) description: "50 MGD Seasonal Disinfection in New Outfall HP-024. Appropriate floatables control measures for the new outfall will be evaluated during design." Table A Project description: "Diversion Structure with Floatables Control at HP-024"
Jamaica Bay	TBD	TBD	2018	3.25%	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	--	--	--	LTCP has not been completed
Newtown Creek[2]	2017	2027	2018	3.25%	$ 718.2	$ 741.5	$ 1,053.0	$ 789.6	$ 1,053.0	$ 789.6	$ 48.1	6%	Design, construction management and land acquisition costs are not included in the cost estimates	Costs include Design, Contruction Management, and Construction	--	Table A project description does not identify alignment (ROW or in-creek) or location (DEP or WWTP) of 39 MG CSO storage tunnel. LTCP preferred alternative #5b-i (ROW Alignment and DEP location) was used for comparison to the Table A costs.
	2017	2027	2018	3.25%	$ 735.8	$ 759.8	$ 1,053.0	$ 789.6	$ 1,053.0	$ 789.6	$ 29.9	4%	Design, construction management and land acquisition costs are not included in the cost estimates	Costs include Design, Contruction Management, and Construction	--	Table A project description does not identify alignment (ROW or in-creek) or location (DEP or WWTP) of 39 MG CSO storage tunnel. LTCP preferred alternative #5a-ii (Creek Alignment and WWTP location) was used for comparison to the Table A costs.
	2017	2027	2018	3.25%	$ 742.1	$ 766.3	$ 1,053.0	$ 789.6	$ 1,053.0	$ 789.6	$ 23.4	3%	Design, construction management and land acquisition costs are not included in the cost estimates	Costs include Design, Contruction Management, and Construction	--	Table A project description does not identify alignment (ROW or in-creek) or location (DEP or WWTP) of 39 MG CSO storage tunnel. LTCP preferred alternative #5a-i (Creek Alignment and DEP location) was used for comparison to the Table A costs.
	2017	2027	2018	3.25%	$ 752.2	$ 776.7	$ 1,053.0	$ 789.6	$ 1,053.0	$ 789.6	$ 13.0	2%	Design, construction management and land acquisition costs are not included in the cost estimates	Costs include Design, Contruction Management, and Construction	--	Table A project description does not identify alignment (ROW or in-creek) or location (DEP or WWTP) of 39 MG CSO storage tunnel. LTCP preferred alternative #5b-ii (ROW Alignment and WWTP location) was used for comparison to the Table A costs.
Open Waters	TBD	TBD	2018	3.25%	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	--	--	--	LTCP has not been completed
Paerdegat Basin	2006	TBD	2018	3.25%	N/A	N/A	TBD	TBD	TBD	TBD	N/A	N/A	--	--	--	LTCP from June 2006 is expected to be revised. 2006 LTCP did not select additional projects and would continue the implementation of the Paerdegat Basin Water Quality Facility Plan
Westchester Creek	2014	N/A	2018	3.25%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	--	--	--	No Additional Projects
Green Infrastructure Program	N/A	N/A	2018	3.25%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	--	--	--	This row used as placeholder for Annualized worksheets

Table A / LTCP / Annualized Cost Calculations / LTCP Info

Location/ Waterbody	Table A: Treated CSO Volume (MGY)	Table A: CSO Bacteria Reduction (%)	LTCP: Treated CSO Volume (MGY)	LTCP: Annual Fecal Coliform Reduction (%)	LTCP: Annual Enterococci Reduction (%)	Original Annual O&M Costs in LTCP ($M)	Annual LTCP O&M Costs (Normalized $M)	Land Acquisition Costs (Normalized $M)	Bond Years	Bond Interest Rate	Table A Construction NTP Year	Annualized Table A Capital Costs (Normalized $M)	Annualized Table A Land Acquisition Costs (Normalized $M)	Total Annualized Costs (Capital + O&M + Land) (Normalized $M)	LTCP Cost Year	Years Life Cycle	Interest Rate (%)	Cost Notes	Updated Cost Notes
Alley Creek and Little Neck Bay	78	59	N/A	23.3	19.6	$ 0.25	$ 0.29	N/A	32	4.75%	2022	$ 0.5757	N/A	$ 0.8690	2013	20	3	May 2013 Present Worth. Based on Probable Bid Cost (PBC) plus O&M cost for 20-year life, assuming three percent interest	For the LTCP alternatives, total project cost includes the capital cost of the project, including construction, engineering and other project development costs
Bergen & Thurston Basins	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	32	4.75%	TBD	TBD	TBD	$ -	TBD				
Bronx River	--	33	N/A	39	39	$ 0.053	$ 0.06	N/A	32	4.75%	2023	$ 9.0819	N/A	$ 9.1402	2015	20	3	All costs are in February 2015 dollars. Probable Bid Cost was used as the estimate of the capital cost. A lifecycle of 20 years and an interest rate of three percent were assumed resulting in a Present Worth Factor of 14.877	Site acquisition costs are not included
Coney Island Creek	--	0	N/A	N/A	N/A	N/A	N/A	N/A	32	4.75%	N/A	N/A	N/A	$ -	2016	20	3	All costs are in February 2016 dollars. The construction costs were developed as PBC and the total net present worth costs were determined by adding the estimated PBC to the NPW of the projected annual O&M costs at an assumed interest rate of 3 percent over a 20-year life cycle	
Flushing Bay[2]	--	51	N/A	53	53	$ 0.9	$ 0.96	$ 180	32	4.75%	2026	$ 50.2846	$ 11.05	$ 62.2977	2016	20	3	The PBC for the construction contract based on CY2016 dollars. A lifecycle of 20 years and an interest rate of three (3.0) percent were assumed resulting in a Present Worth Factor of 14.877	Design, construction management and land acquisition costs are not included in the cost estimates
Flushing Creek	584	51	N/A	51	49	$ 0.66	$ 0.75	$ 60	32	4.75%	2023	$ 1.9261	$ 3.68	$ 6.3607	2014	20	3	All costs are in October 2014 dollars. Capital costs were developed as PBC and the total net present worth costs were determined using the PBC estimated plus the NPW of the projected annual O&M costs at an assumed interest rate of 3 percent over a 20-year life cycle	Costs for Alternative 3 include all of the facilities and support systems required to implement tank disinfection at outfall TI-010 plus disinfection at the TI-011 outfall
Gowanus Canal[1]	--	56	N/A	53	53	$ 1.9	$ 2.09	$ 100	32	4.75%	2020	$ 43.3371	$ 6.14	$ 51.5694	2015	20	3	All costs are reported in 2015 dollars. Assumed interest rate of 3 percent over a 20-year life cycle	Costs for Alternative 1 include all the construction, facilities and support systems required to build an 8 MG tank at Outfall RH-034 and a 4 MG tank at Outfall OH-007
	--	56	N/A	53	53	$ 1.4	$ 1.54	$ 100	32	4.75%	2020	$ 43.3371	$ 6.14	$ 51.0190	2015	20	3	All costs are reported in 2015 dollars. Assumed interest rate of 3 percent over a 20-year life cycle	Costs for Alternative 2 include all the construction, facilities and support systems required to build an 5.7 MG tank at Outfall RH-034 and a 2.5 MG tank at Outfall OH-007
	--	56	N/A	53	53	$ 0.9	$ 0.99	$ 100	32	4.75%	2020	$ 43.3371	$ 6.14	$ 50.4687	2015	20	3	All costs are reported in 2015 dollars. Assumed interest rate of 3 percent over a 20-year life cycle	Costs for Alternative 3 include all the construction, facilities and support systems required to build an 3.5 MG tank at Outfall RH-034 and a 1.4 MG tank at Outfall OH-007
Hutchinson River	65	14	N/A	14	14	$ 1.25	$ 1.42	$ 10	32	4.75%	2026	$ 7.4482	$ 0.61	$ 9.4829	2014	20	3	All costs are in June 2014 dollars. Costs assumed an interest rate of 3 percent over a 20-year life cycle. Capital costs were developed as Probable Bid Cost (PBC)	These costs include the new diversion structures and connecting piping from the diversion structures to the disinfection facility, new 10-ft. diameter conduit to provide contact time, downstream weir structure with dewatering pumps and dewatering force main to the local sewer system, new outfall structure, floatables control and above-grade facilities for odor control, electrical, and chemical storage and feed equipment. It was also assumed that rock excavation would be required with this series of control measures
Jamaica Bay	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	32	4.75%	TBD	TBD	TBD	$ -	TBD			LTCP has not been completed	
Newtown Creek[2]	--	60	N/A	63	68	$ 5.0	$ 5.16	$ 140	32	4.75%	2026	$ 48.4900	$ 8.60	$ 62.2498	2017	20 or 100	3	All costs are in February 2017 dollars. The construction costs were developed as Probable Bid Costs (PBC), at an assumed interest rate of 3 percent over a 20-year life cycle. However, for tunnel alternatives that provide longer service, a longer 100-year lifecycle was used for computing NPW. Design, construction management and land acquisition costs are not included in the cost estimates	
	--	60	N/A	63	68	$ 5.0	$ 5.16	$ 140	32	4.75%	2026	$ 48.4900	$ 8.60	$ 62.2498	2017	20 or 100	3	All costs are in February 2017 dollars. The construction costs were developed as Probable Bid Costs (PBC), at an assumed interest rate of 3 percent over a 20-year life cycle. However, for tunnel alternatives that provide longer service, a longer 100-year lifecycle was used for computing NPW. Design, construction management and land acquisition costs are not included in the cost estimates	
	--	60	N/A	63	68	$ 5.0	$ 5.16	$ 140	32	4.75%	2026	$ 48.4900	$ 8.60	$ 62.2498	2017	20 or 100	3	All costs are in February 2017 dollars. The construction costs were developed as Probable Bid Costs (PBC), at an assumed interest rate of 3 percent over a 20-year life cycle. However, for tunnel alternatives that provide longer service, a longer 100-year lifecycle was used for computing NPW. Design, construction management and land acquisition costs are not included in the cost estimates	
	--	60	N/A	63	68	$ 5.0	$ 5.16	$ 140	32	4.75%	2026	$ 48.4900	$ 8.60	$ 62.2498	2017	20 or 100	3	All costs are in February 2017 dollars. The construction costs were developed as Probable Bid Costs (PBC), at an assumed interest rate of 3 percent over a 20-year life cycle. However, for tunnel alternatives that provide longer service, a longer 100-year lifecycle was used for computing NPW. Design, construction management and land acquisition costs are not included in the cost estimates	
Open Waters	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	32	4.75%	TBD	TBD	TBD	$ -	TBD				
Paerdegat Basin	TBD	TBD	N/A	N/A	N/A	N/A	N/A	TBD	32	4.75%	TBD	TBD	TBD	$ -	2006			2005 dollars? Values for Paerdegat are for "Estimated Costs" NYCDEP stated base year was 2006 in email to EPA	
Westchester Creek	--	0	N/A	N/A	N/A	N/A	N/A	N/A	32	4.75%	N/A	N/A	N/A	$ -	2014	20	3	All costs are in June 2014 dollars. Capital costs were developed as Probable Bid Costs (PBC) and the total net present worth costs were determined using the PBC estimated plus the net present worth of the projected operation and maintenance (O&M) costs at an assumed interest rate of 3 percent over a 20-year life cycle	
Green Infrastructure Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32	4.75%	N/A	N/A	N/A	$ -	N/A				

Preferred Alternative Option #1

LTCP; Table A (12/8/2017 version) — Capital Costs include Design, Contruction Management, Construction

Location/ Waterbody	LTCP: Net Present Worth ($M)	LTCP: Capital Costs ($M)	LTCP: Annual O&M Costs ($M)	Alternative Description	Alternative # in LTCP	Notes	QA	Table A: Total Cost ($M)	Encumbered Cost ($M)	Total Cost minus Encumbered Cost ($M)	Land Acquisition Total Area (Acres)	Land Acquisition Total Cost ($M)	Construction NTP	Midpoint of Construction	Project Description in Table A	Table A Project Matches LTCP Project?	Notes
Alley Creek and Little Neck Bay	$ 11.3	$ 7.6	$ 0.25	Recreational Season Disinfection Operation in Existing Alley Creek CSO Retention Facility	4		Done	$ 13	$ 2	$ 11	N/A	N/A	2022	2023	Seasonal Disinfection @ CSO Retention Facility	Yes	
Bergen & Thurston Basins	TBD	TBD	TBD	TBD	TBD			TBD	$ -	TBD	TBD	TBD	TBD	TBD			
Bronx River	$ 110.9	$ 110.1	$ 0.053	Floatables control at HP-0011 and Combination of Outfall HP-007 Relief + Outfall HP-009 Relief	2		Done	$ 185	$ -	$ 185	N/A	N/A	2023	2025	New Regulator and Floatables Control at HP-011 + Hydraulic Relief at outfalls HP-007/-009	Yes	
Coney Island Creek	N/A	N/A	N/A	None selected	None selected			N/A	$ -	N/A	N/A	N/A	N/A	N/A	No Additonal Projects	N/A	
Flushing Bay[2]	$ 683	$ 670	$ 0.9	50% CSO Control Tunnel (25 MG storage), to be constructed at either Ingraham's Mountain or Luyster Creek	7a or 7b	(#7a) Ingraham's Mountain location or (#7b) Luyster Creek location	Done	$ 1,241	$ -	$ 1,241	4.5	$ 180	2026	2031	25 MG CSO Storage Tunnel (Outfalls BB-006 and BB-008)	Yes, but location not known	Table A does not identify location of 25 MG CSO storage tunnel (Ingraham's Mountain or Luyster Creek)
Flushing Creek	$ 16.70	$ 6.89	$ 0.66	TI-010 Outfall Disinfection at Tank and Diversion Chamber 5 plus TI-011 Outfall Disinfection	3		Done	$ 46	$ 8	$ 38	1.5	$ 60	2023	2024	Floatables Control (Baffles) at Diversion Chamber 3 (Outfall TI-010) and Regulator TI-09 (Outfall TI-011)	No	Unable to find a match from the alternatives described in the LTCP for the project description in Table A. No mention of floatbles control/baffles as part of any of the listed alternatives
Gowanus Canal[1]	$ 879	$ 801	$ 1.9	8 MG Tank at Outfall RH-034 and 4 MG Tank at Outfall OH-007	1	Selected alternatives represent different tank sizes	Done	$ 934	$ 79	$ 855	2.5	$ 100	2020	2024	8 MG Tank at RH-034 and 4 MG Tank at OH-007	Yes (for alternative #1)	
	$ 683	$ 663	$ 1.4	5.7 MG Tank at Outfall RH-034 and 2.5 MG Tank at Outfall OH-007	2	Selected alternatives represent different tank sizes	Done	$ 934	$ 79	$ 855	2.5	$ 100	2020	2024	8 MG Tank at RH-034 and 4 MG Tank at OH-007	Yes (for alternative #1)	
	$ 507	$ 493	$ 0.9	3.5 MG Tank at Outfall RH-034 and 1.4 MG Tank at Outfall OH-007	3	Selected alternatives represent different tank sizes	Done	$ 934	$ 79	$ 855	2.5	$ 100	2020	2024	8 MG Tank at RH-034 and 4 MG Tank at OH-007	Yes (for alternative #1)	
Hutchinson River	$ 108	$ 90	$ 1.25	50 MGD Seasonal Disinfection in New Outfall HP-024. Appropriate floatables control measures for the new outfall will be evaluated during design	12		Done	$ 167	$ -	$ 167	0.25	$ 10	2026	2028	Diversion Structure with Floatables Control at HP-024	Unclear	No mention of disinfection in Table A description
Jamaica Bay	TBD	TBD	TBD	TBD	TBD			TBD	$ -	TBD	TBD	TBD	TBD	TBD	TBD	N/A	
Newtown Creek[2]	$ 703	$ 570	$ 5.0	26 MGD BAPS Expansion and Deep Tunnel for 62.5% Control (39 MG storage) of Three Largest Outfalls	5b-i	Differences in selected alternatives are from 2 tunnel alignment options and 2 potential site locations	Done	$ 1,053	$ -	$ 1,053	3.5	$ 140	2026	2027	26 MGD BAPS Expansion and 39 MG Deep Tunnel	Yes, but tunnel alignment and location not given	Table A does not identify alignment (ROW or in-creek) or location (DEP or WWTP) of 39 MG CSO storage tunnel
	$ 717	$ 584	$ 5.0	26 MGD BAPS Expansion and Deep Tunnel for 62.5% Control of Three Largest Outfalls (Creek Alignment)(Longer - WWTP)	5a-ii			$ 1,053	$ -	$ 1,053	3.5	$ 140	2026	2027	26 MGD BAPS Expansion and 39 MG Deep Tunnel	Yes, but tunnel alignment and location not given	Table A does not identify alignment (ROW or in-creek) or location (DEP or WWTP) of 39 MG CSO storage tunnel
	$ 722	$ 589	$ 5.0	26 MGD BAPS Expansion and Deep Tunnel for 62.5% Control of Three Largest Outfalls (ROW Alignment)(Shorter - DEP)	5a-i			$ 1,053	$ -	$ 1,053	3.5	$ 140	2026	2027	26 MGD BAPS Expansion and 39 MG Deep Tunnel	Yes, but tunnel alignment and location not given	Table A does not identify alignment (ROW or in-creek) or location (DEP or WWTP) of 39 MG CSO storage tunnel
	$ 730	$ 597	$ 5.0	26 MGD BAPS Expansion and Deep Tunnel for 62.5% Control of Three Largest Outfalls (ROW Alignment)(Longer - WWTP)	5b-ii			$ 1,053	$ -	$ 1,053	3.5	$ 140	2026	2027	26 MGD BAPS Expansion and 39 MG Deep Tunnel	Yes, but tunnel alignment and location not given	Table A does not identify alignment (ROW or in-creek) or location (DEP or WWTP) of 39 MG CSO storage tunnel
Open Waters	TBD	TBD	TBD	TBD	TBD			TBD	$ -	TBD	TBD	TBD	TBD	TBD	TBD	N/A	
Paerdegat Basin	> $300	N/A	N/A	Continuing the implementation of the Paerdegat Basin Water Quality Facility Plan	N/A	LTCP from June 2006 is expected to be revised		TBD	$ -	TBD	TBD	TBD	TBD	TBD	TBD	TBD	
Westchester Creek	N/A	N/A	N/A	None selected	None selected			N/A	$ -	N/A	N/A	N/A	N/A	N/A	No Additional Projects	N/A	
Green Infrastructure Program	N/A	N/A	N/A	N/A	N/A			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Preferred Alternative Options #2–#4 (if applicable) — LTCP

Location/ Waterbody	Option #2: Net Present Worth ($M)	Option #2: Capital Costs ($M)	Option #2: Annual O&M Costs ($M)	Option #3: Net Present Worth ($M)	Option #3: Capital Costs ($M)	Option #3: Annual O&M Costs ($M)	Option #4: Net Present Worth ($M)	Option #4: Capital Costs ($M)	Option #4: Annual O&M Costs ($M)
Alley Creek and Little Neck Bay									
Bergen & Thurston Basins									
Bronx River									
Coney Island Creek									
Flushing Bay[2]	$ 842	$ 829	$ 0.9						
Flushing Creek									
Gowanus Canal[1]	$ 683	$ 663	$ 1.4	$ 507	$ 493	$ 0.9			
Hutchinson River									
Jamaica Bay									
Newtown Creek[2]	$ 717	$ 584	$ 5.0	$ 722	$ 589	$ 5.0	$ 730	$ 597	$ 5.0
Open Waters									
Paerdegat Basin									
Westchester Creek									
Green Infrastructure Program									

[1] Three potential alternatives were selected to meet future mandated installation of DEP Superfund tanks, but are not being considered as costs for the LTCP by DEP. (See page 9-28 in the Gowanus LTCP.) However, NYCDEP clarified that the costs for Superfund projects for the Gowanus Canal and Newtown Creek basins will be borne by their ratepayers (see email from NYC DEP to USEPA dated January 5, 2018).

[2] Where there are more than one Preferred Alternative listed, they are listed in order of highest effectiveness for bacterial reduction (e.g., Option #1 will have higher reduction than Option #2), if applicable. If the the reduction percentages were the same, then the least cost was listed first.

Table A and Table B values from file titled "LTCP Cost Tables 12-20-17.pdf"

Table C values from file titled "EPA Responses - January 19-v2 (003).pdf"

Land Acquisition Costs in Table A, and all Table B Costs are assumed to be in 2018 dollars.

The costs provided in Table A were based on funding allocated in the DEP Capital Budget for LTCP projects in procurement and it includes design costs and construction management costs that were not part of the LTCP estimates (email from NYC DEP to USEPA dated January 5, 2018).

For projects in Table A for which the funding was not yet allocated, the LTCP Probable Bid Cost was used and escalated to midpoint of construction; additional funding for design and construction management was also included in the total project cost.

Total All Projects	Capital Costs ($M)	O&M Costs ($M)
Normalized Table A Capital Costs ($M)	$ 2,624.09	
Land Acquisition Costs (2018 $M)	$ 490.00	
Normalized Annual O&M Costs in LTCP ($M)		$ 10.74
Table B Committed Existing CSO Costs (2018 $M)	$ 1,110.00	
Annual Table B Committed Existing CSO O&M Cost (2018 $M)		$ 22.10
TOTAL	$ 4,224.09	$ 32.84

Location/ Waterbody	Committed CSO Costs Start Date	Bond Years	Bond Interest Rate	Table B Committed Existing CSO Costs (2018 $M)	Annualized Table B Committed Existing CSO Capital Costs (Normalized $M)	Annual Table B Committed Existing CSO O&M Cost (Normalized $M)
Alley Creek and Little Neck Bay	2018	32	4.75%	$ -	$ -	$ 0.4
Bergen & Thurston Basins	2018	32	4.75%	$ 12	$ 0.74	$ -
Bronx River	2018	32	4.75%	$ -	$ -	$ -
Coney Island Creek	2018	32	4.75%	$ -	$ -	$ -
Flushing Bay	2018	32	4.75%	$ -	$ -	$ -
Flushing Creek	2018	32	4.75%	$ -	$ -	$ 2.3
Gowanus Canal	2018	32	4.75%	$ -	$ -	$ -
Hutchinson River	2018	32	4.75%	$ -	$ -	$ -
Jamaica Bay	2018	32	4.75%	$ 65	$ 3.99	$ 1.6
Newtown Creek	2018	32	4.75%	$ -	$ -	$ -
Open Waters	2018	32	4.75%	$ -	$ -	$ -
Paerdegat Basin	2018	32	4.75%	$ -	$ -	$ 5.0
Westchester Creek	2018	32	4.75%	$ -	$ -	$ -
Green Infrastructure Program	2018	32	4.75%	$ 1,033	$ 63.44	$ 12.8

Table A and Table B values from file titled "LTCP Cost Tables 12-20-17.pdf"
Table C values from file titled "EPA Responses - January 19-v2 (003).pdf"
Land Acquisition Costs in Table A, and all Table B Costs are assumed to be in 2018 dollars.
Table B lists committed costs for Newtown Creek as $31M. However, since the stated project completion date is 2013, an assumption has been made that these costs have been spent and are not included.

Section	Name
1. Project Information	Current capacity of the pollution control system (MGD)
	Design capacity of the pollution control system (MGD)
	Expected excess capacity after completion of the project (%)
	Project groundbreaking date (MM/DD/YYYY)
	Projected date of completion (MM/DD/YYYY)
2. MPS Inputs	**Capital cost of the project ($)**
	Other one-time costs:
	Description of the cost element
	Cost ($)
	Description of the cost element
	Cost ($)
	Description of the cost element
	Cost ($)
	Capital costs to be paid by grants ($)
	Type of financing (e.g. G.O. bond, revenue bond, bank loan)
	Interest rate for financing (%)
	Time period of financing (years)
	Annual O&M Costs:
	Description of the cost element
	Cost ($)
	Description of the cost element
	Cost ($)
	Description of the cost element
	Cost ($)
	Description of the cost element
	Cost ($)
	Description of the cost element
	Cost ($)

	Wastewater Sewer Rate ($/100 cubic feet)
	Average Household Consumption (gallons/year)
	Average Household Consumption (100 cubic feet/year)
	Average Household Average Annual Wastewater Bill ($/year)
	Total annual cost of existing pollution control ($)
	Amount of existing costs paid by households ($)
	Number of households (do not use number of hook-ups)
	Optional based on selection:
	Different percentage
	Total usage of project (e.g., MGD for wastewater treatment)
	Usage due to household use (MGD of household wastewater)
	Industrial surcharges, if any ($ total per year)
	Median household income (from Census)
	Current CPI
	CPI for the year of the census
4. Secondary Test Inputs	Direct net debt ($)
	Overlapping debt ($)

	Market value of taxable property ($)
	Bond rating (for uninsured bonds)
	Community unemployment rate (%)
	National unemployment rate (%)
	Community median household income (not adjusted for inflation)
	State median household income (for same time period as community MHI) ($)
	Property tax collection rate (%)
	Property tax revenues ($)
	Population (#)
Widespread Impact Inputs	Estimated change in Median Household Income (MHI)
	Estimated change in the unemployment rate
	Estimated change in overall net debt as a percent of full market value of taxable property
	Estimated change in % of households below the poverty line
	Impact on commercial development potential
	Impact on property values

Value	Source
$ 4,224,089,791.38	NYCDEP: "NYCDEP Responses to USEPA Follow up Questions on LTCP Costs 12-8-17" and updated associated Tables
General Obligation Bond	
4.75%	NYCDEP: "NYCDEP Responses to USEPA Follow up Questions on LTCP Costs 12-8-17" and updated associated Tables
32	NYCDEP: "NYCDEP Responses to USEPA Follow up Questions on LTCP Costs 12-8-17" and updated associated Tables
$ 32,835,645.61	NYCDEP: "NYCDEP Responses to USEPA Follow up Questions on LTCP Costs 12-8-17" and updated associated Tables

$ 6.06	Per EPA/NYCDEP: "The Water Board voted to repeal the 2.1% rate increase on 1/26/18. The wastewater rate will remain at $6.06 per hcf during FY 2018."
65,530	"Combined Sewer Overflow Long Term Control Plan Financial Capability Assessment February 2016" NYC Environmental Protection
87.6009	Tetra Tech calculation
$ 530.86	Tetra Tech calculation
$ 1,660,664,499.13	Tetra Tech calculation
$ 1,660,664,499.13	Tetra Tech calculation
3,128,246	United States Census Bureau
1	
$ 55,191	United States Census Bureau
269.564	Bureau of Labor Statistics
263.722	Bureau of Labor Statistics
$ 41,600,000,000	"Combined Sewer Overflow Long Term Control Plan Financial Capability Assessment February 2016" NYC Environmental Protection

$ 858,100,000,000	"Combined Sewer Overflow Long Term Control Plan Financial Capability Assessment February 2016" NYC Environmental Protection
Aa2	December 1, 2017 Moody's report on New York City. Footnote: "Source: New York City audited financial statements; Moody's Investors Service"
4.0%	Bureau of Labor Statistics
3.9%	Bureau of Labor Statistics
$ 55,191	United States Census Bureau
$ 60,741	United States Census Bureau
98.5%	"Combined Sewer Overflow Long Term Control Plan Financial Capability Assessment February 2016" NYC Environmental Protection
$ 21,300,000,000	"Combined Sewer Overflow Long Term Control Plan Financial Capability Assessment February 2016" NYC Environmental Protection
8,537,673	United States Census Bureau

Link

The meeting materials are available at: http://www.nyc.gov/html/nycwaterboard/pdf/minutes_and_resolutions/wb-materials-20180126.pdf And, a video recording of the meeting is available at: https://www.youtube.com/watch?v=zUwh_ymeGh4&index=1&list=PLcLNnQfI92DdFRGxTsGhPDhrcGeI-iZAW
http://www.nyc.gov/html/dep/pdf/cso_long_term_control_plan/2016-cso-ltcp-financial-capability-assessment.pdf
https://www.census.gov/quickfacts/fact/table/newyorkcitynewyork/PST045216
https://www.census.gov/quickfacts/fact/table/newyorkcitynewyork/PST045216
https://data.bls.gov/timeseries/CUURA101SA0?amp%253bdata_tool=XGtable&output_view=data&include_graphs=true
https://data.bls.gov/timeseries/CUURA101SA0?amp%253bdata_tool=XGtable&output_view=data&include_graphs=true
http://www.nyc.gov/html/dep/pdf/cso_long_term_control_plan/2016-cso-ltcp-financial-capability-assessment.pdf

http://www.nyc.gov/html/dep/pdf/cso_long_term_control_plan/2016-cso-ltcp-financial-capability-assessment.pdf
https://comptroller.nyc.gov/wp-content/uploads/2017/12/NYC-GO-2018CD-Moodys-Report.pdf
https://www.bls.gov/regions/new-york-new-jersey/summary/blssummary_newyorkcity.pdf
https://www.bls.gov/regions/new-york-new-jersey/summary/blssummary_newyorkcity.pdf
https://www.census.gov/quickfacts/fact/table/newyorkcitynewyork/PST045216
https://www.census.gov/quickfacts/fact/table/NY/PST045216
http://www.nyc.gov/html/dep/pdf/cso_long_term_control_plan/2016-cso-ltcp-financial-capability-assessment.pdf
http://www.nyc.gov/html/dep/pdf/cso_long_term_control_plan/2016-cso-ltcp-financial-capability-assessment.pdf
https://www.census.gov/quickfacts/fact/table/newyorkcitynewyork/PST045216#viewtop

Notes
All normalized (to year 2018) capital and land acquisition for preferred alternatives, and Committed Existing CSO capital costs in Table B.
Page 2: "For the purpose of this analysis we assumed 32 year bonds with 4.75% interest rate."
Page 2: "For the purpose of this analysis we assumed 32 year bonds with 4.75% interest rate."
Normalized (to year 2018) O&M costs from LTCPs and Committed Existing CSO O&M from Table B.

Page 3, footnote #4: "Based on average consumption across all metered residential units of 65,530 gallons/year and FY 2016 Rates."
100 cubic feet = 748.052 gallons
"Wastewater Sewer Rate ($/100 cubic feet)" x "Average Household Consumption (cubic feet/year)"
"Average Household Average Annual Wastewater Bill ($/year)" x "Number of households"
"Average Household Average Annual Wastewater Bill ($/year)" x "Number of households"
Households, 2012-2016
**This is an assumption to demonstrate worst case scenario
Median household income (in 2016 dollars), 2012-2016
CPI for December 2017. Series Title: All items in New York-Northern New Jersey-Long Island, NY-NJ-CT-PA, all urban consumers, not seasonally adjusted. Series ID: CUURA101SA0
CPI for July 2016. Series Title: All items in New York-Northern New Jersey-Long Island, NY-NJ-CT-PA, all urban consumers, not seasonally adjusted. Series ID: CUURA101SA0
Page 5: "At the end of FY 2014, NYC had more than $41.6 billion in outstanding G.O. debt, and the DMPV within NYC was $858.1 billion." (FMPV = Full Market Property Value) "Debt and Market Value information as of June 30, 2014."

Page 6: "According to the NYC Property Tax Annual report issued for FY 2014, NYC had billed $21.3 billion in real property taxes against an $858.1 billion FMPV, which amounts to 2.5 percent of FMPV." (FMPV = Full Market Property Value) Page 5: "Debt and Market Value information as of June 30, 2014."
Rating is for General Obligation Bonds
New York City Unemployment rate for Oct 2017
United States Unemployment rate for Oct 2017
Median household income (in 2016 dollars), 2012-2016
Median household income (in 2016 dollars), 2012-2016
See Table 3 on page 5. "Debt and Market Value information as of June 30, 2014."
Page 6: "According to the NYC Property Tax Annual report issued for FY 2014, NYC had billed $21.3 billion in real property taxes against an $858.1 billion FMPV, which amounts to 2.5 percent of FMPV." (FMPV = Full Market Property Value) Page 5: "Debt and Market Value information as of June 30, 2014."
Population estimates, July 1, 2016, (V2016)

Pollution Control Project Summary Information (Worksheet A in the Guidance)

Description: This worksheet identifies and documents the pollution control project(s) needed to meet water quality standards. See the Guidance documentation below for more information.

Instructions: Enter information in the **cells marked with an asterisk (*)** about the most cost-effective approach to meet water quality standards. The most accurate estimate of project costs may be available from the discharger's design engineers. If site-specific engineering cost estimates are not available, preliminary project cost estimates may be derived from a comparable project in the State or from the judgment of experienced water pollution control engineers.

Discharge management options to consider include:
- Pollution prevention
- End-of-pipe treatment
- Upgrades or additions to existing treatment.

Types of pollution prevention activities to consider are:
- Public education
- Change in raw materials
- Substitution of process chemicals
- Change in process
- Water recycling and reuse
- Pretreatment requirements.

Whatever the approach, the information should demonstrate that the proposed project is the most appropriate means of meeting water quality standards and fully document project cost estimates. If at least one of the options that meets water quality standards will not have a substantial financial impact, then do not proceed with the analysis.

Current Capacity of the Pollution Control System (MGD)	*
Design Capacity of the Pollution Control System (MGD)	*
Current Excess Capacity (%)	0.0%
Expected Excess Capacity after Completion of Project (%)	*
Projected Groundbreaking Date (MM/DD/YYYY)	*
Projected Date of Completion (MM/DD/YYYY)	*

Describe the proposed pollution control project.

*

Describe the other pollution control options considered, explaining why each option was rejected.

*

Guidance Documentation

Component	*Section*	*Page*
Verify Project Costs	2.1.a	2-3
Documentation of Other Options Considered	2.1.a	2-3
Annual Cost of Pollution Control (overview)	2.1.b	2-4

Data Needed to Calculate the MPS (Worksheets B and C in the Guidance)

Description: This worksheet contains the information needed to calculate the municipal preliminary screener (MPS). The MPS is the average annualized pollution control cost per household in the affected community. The MPS helps to determine whether or not the community can clearly pay for the project without incurring any substantial impacts. See the Guidance documentation below for additional information.

Instructions: Enter the requested information into the **cells marked with an asterisk (*).** The affected community is the governmental jurisdiction or jurisdictions responsible for paying compliance costs. Current costs of pollution controls can also be considered in addition to the projected annual costs of the proposed pollution control project. The existing cost per household usually can be obtained from municipal records. If project costs are estimated for a prior year, these costs should be adjusted to reflect current year prices using the average annual national Consumer Price Index (CPI) inflation rate for the period available from the Bureau of Labor Statistics.

Capital Cost		
Upgrade Type		*
Capital Cost of Project ($)	$4,224,089,791	*
Other One-Time Costs of Project (list below, if any):		
Description of Cost Element	*Cost ($)*	
0 *	$0	*
0 *	$0	*
0 *	$0	*

Capital Costs to be Paid by Grants ($)	$0	*
Type of Financing (e.g., G.O. bond, revenue bond, bank loan)	General Obligation Bond	*
Interest Rate for Financing (%)	4.75%	*
Time Period of Financing (years)	32	*

Annual costs of operation and maintenance (including but not limited to: monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement; list below.)

Description of Cost Element	*Cost ($)*	
0 *	$32,835,646	*
0 *	$0	*
0 *	$0	*
0 *	$0	*
0 *	$0	*

Total Annual Cost of Existing Pollution Control ($)	$1,660,664,499	*
Amount of Existing Costs Paid by Households ($)	$1,660,664,499	*
Number of Households (do not use number of hook-ups)	3,128,246	*

Will households provide revenues for the new pollution control project in the same proportion that they support existing pollution control? (Check a, b or c, below.)

◉	a) Yes		#### *
○	b) No, they will pay a different percentage. Enter to right.	100.00%	#### *
○	c) No, they will pay based on flow. Answer three questions to right. (Corresponds to **Worksheet C, Option A**.)		
	1. Total Usage of Project (e.g., MGD for wastewater treatment)	0	#### *
	2. Usage Due to Household Use (MGD of household wastewater)	0	*
	3. Industrial Surcharges, if any ($ total per year)	0	*

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Median Household Income (from Census)	$55,191	*
Current CPI	$270	*
CPI for the year of the Census	$264	*
Adjustment Factor [current CPI / CPI for the year of the Census]	1.02	
Adjusted Median Household Income [Median Household Income x Adjustment Factor]	$56,414	

Guidance Documentation

Component	*Section*	*Page*
Evaluating Substantial Impacts (overview)	2	2-1
Capital Cost	2.1a	2-2
Annual Cost of Existing Pollution Controls	2.1b	2-3
Financing	2.1b	2-4
Annual Cost of Operations and Maintenance	2.1b	2-4
Median Household Income	2.3	2-7
Adjusting Median Household Income	2.3	2-7

Municipal Preliminary Screener (Worksheet D in the Guidance)

Description: This worksheet calculates and displays the Municipal Preliminary Screener (MPS), which is the total annual pollution control costs per household (existing annual cost per household plus the incremental cost related to the proposed project) as a percentage of median household income.

Total Annual Pollution Control Cost per Household / Adjusted Median Household Income × 100

The MPS indicates if a public entity would clearly not incur substantial economic impacts as a result of the proposed pollution control project.

Instructions: Evaluate the MPS by noting which cell is highlighted in **orange** and **marked with an asterisk (*).** If the MPS is less than 1.0 percent of median household income, the EPA does not expect the pollution control project to impose a substantial economic impact on the community; do not continue to the secondary affordability test. If the MPS is greater than 2.0 percent of median household income, then the pollution control project may result in a substantial economic impact to the community; continue to the secondary affordability test. If the MPS is between 1.0 and 2.0 percent of median household income, the community may incur a mid-range economic impact; continuing to the secondary affordability test is optional. See the Guidance documentation below for more information.

A. Calculation of the MPS

Total Annual Pollution Control Cost per Household [**Worksheet C**, (11) or **Worksheet C: Option A**, (10)]	$624.28	(1)
Adjusted Median Household Income	$56,414	(2)
MPS [[(1) / (2)] × 100]	1.1%	(3)

B. Evaluation of the MPS

Note column of cell highlighted in **orange** and **marked with an asterisk (*)** below:

Little Impact	Mid-Range Impact	Large Impact
Less than 1.0%	1.0% - 2.0% *	Greater than 2.0%
Indication of no substantial economic impacts	----------> Proceed to Secondary Test	

Guidance Documentation		
Component	***Section***	***Page***
MPS	2.3	2-6
Annual Pollution Control Cost per Household	2.2	2-5
Median Household Income	2.3	2-7
Census	2.3	2-7
Interpreting MPS	2.3	2-7
Determining Need for Secondary Test	2.3	2-7

Data Needed to Calculate the Secondary Test Score (Worksheet E in the Guidance)

Description: This worksheet contains the numerical data necessary to calculate the secondary test score. The secondary test score characterizes the community's current financial and socioeconomic condition. See the Guidance documentation below for additional information.

Instructions: If the MPS indicates substantial impacts may occur (i.e. it exceeds 1.0%), proceed with the secondary test by entering socioeconomic data for the affected community in the **cells marked with an asterisk (*)**. Additional information on potential sources of data are provided in the tab named: "Potential Data Sources," and example data sources are provided in the tab named: "Example Data Sources." If one or more of the six indicators is not developed, provide an explanation as to why the indicator is not appropriate or not available.

A. Socioeconomic Data

Data	Potential Source	Value	
Direct Net Debt ($)	Community Financial Statements Town, County or State Assessor's Office	$ 41,600,000,000 *	(1)
Overlapping Debt ($)	Community Financial Statements Town, County or State Assessor's Office	$ - *	(2)
Market Value of Taxable Property ($)	Community Financial Statements Town, County or State Assessor's Office	$ 858,100,000,000 *	(3)
Bond Rating (for uninsured bonds)	Standard and Poor's or Moody's	Aa2 *	(4)
Community Unemployment Rate (%)	Census of Population Regional Data Centers	4.0% *	(5)
National Unemployment Rate (%)	Bureau of Labor Statistics	3.9% *	(6)
Community Median Household Income (not adjusted for inflation)	Census of Population	$ 55,191	(7)
State Median Household Income (for same time period as Community MHI) ($)	Census of Population	$ 60,741 *	(8)
Property Tax Collection Rate (%)	Community Financial Statements Town, County or State Assessor's Office	98.5% *	(9)
Property Tax Revenues ($)	Community Financial Statements Town, County or State Assessor's Office	$ 21,300,000,000 *	(10)

If any cell above is left blank, explain why the indicator is not appropriate or not available:

*

Some states have statutory limits on property tax collections and/or rates, or data on full-market value of taxable property are not available. If this is the case, select "yes" below and provide the number of people residing in the affected community.

Are there statutory limits on property tax collections and/or rates in the state, or are data on the full-market value of taxable property not available?

(•) a) No *

( ) b) Yes (enter the number of residents in the affected community below) *

Population (#)	Census of Population	*	(Pop.)

B. Calculated Indicators (for informational purposes only)		
1. Overall Net Debt as a Percent of Full Market Value of Taxable Property		
Overall Net Debt [(1) + (2)]	$41,600,000,000	(11)
Overall Net Debt as a Percent of Full Market Value of Taxable Property [[(11)/(3)] × 100]	4.85%	(12)
1a. Overall Net Debt Per Capita (Alternative Indicator)		
Overall Net Debt Per Capita [[(11) / (Pop.)] × 100]	N/A	(12 Alt.)
2. Property Tax Revenues as a Percent of Full Market Value of Taxable Property		
Property Tax Revenues as a Percent of Full Market Value of Taxable Property [[(10)/(3)] × 100]	2.48%	(13)

Guidance Documentation		
Component	***Section***	***Page***
Secondary Test (overview)	2.4	2-7
Net and Overlapping Debt	2.4	2-9
Bond Rating	2.4	2-8
Unemployment Rate	2.4	2-9
Median Household Income	2.4	2-10
Property Tax	2.4	2-10
Alternative Indicators	2.4	2-11
Use of Secondary Test	2.4	2-11

Calculation of the Secondary Test Score (Worksheet F in the Guidance)

Description: This worksheet calculates the secondary test score, which characterizes the affected community's current financial and socioeconomic condition. The secondary test score is used in combination with the MPS to evaluate whether or not substantial economic impacts are likely to occur. See the Guidance documentation below for additional information.

Instructions: Verify that the appropriate cell is selected in each row and in the "Score" column to be summed below (highlighted in **orange** and **marked with an asterisk (*)**).

Indicator	Secondary Indicators			Score
	Weak [a]	Mid-Range [b]	Strong [c]	
Bond Rating **Worksheet T**, (4)	Below BBB (S&P) Below Baa (Moody's)	BBB (S&P) Baa (Moody's)	Above BBB (S&P) Above Baa (Moody's) *	3 *
Overall Net Debt as Percent of Full Market Value of Taxable Property **Worksheet T**, (12)	Above 5%	2% - 5% *	Below 2%	2 *
Overall Net Debt Per Capita[1] **Worksheet T**, (12 Alt.)	Greater than $3,000	$1,000 - $3,000	Less than $1,000	N/A
Unemployment[2] **Worksheet T**, (5) & (6)	Above National Average	National Average *	Below National Average	2 *
Median Household Income[3] **Worksheet T**, (7) & (8)	Below State Median	State Median *	Above State Median	2 *
Property Tax Revenues as a Percent of Full Market Value of Taxable Property[4] **Worksheet T**, (13)	Above 4%	2% - 4% *	Below 2%	2 *
Property Tax Collection Rate[4] **Worksheet T**, (9)	< 94%	94% - 98%	> 98% *	3 *
Average of Financial Management Indicators[4] **Worksheet T**, (13) and (9)				N/A
	a. Weak is a score of 1 point b. Mid-Range is a score of 2 points c. Strong is a score of 3 points		**SUM**	**14**
			AVERAGE	**2.3**

Notes:

[1] If the state has statutory limits on property tax collections and/or rates or data on full-market value of taxable property are not available, "Overall Net Debt as Percent of Full Market Value of Taxable Property" is replaced with "Overall Net Debt Per Capita" and "Property Tax Revenues as a Percent of Full-Market Value of Taxable Property" is dropped.

[2] If the community's employment rate is equal to the national average unemployment rate, plus or minus 1%, then the community's unemployment rate is assessed as being equal to the national rate.

[3] If the community's median household income is equal to the state median, plus or minus 10%, then the community's median household income is assessed as being equal to the state's median household income.

[4] If one of the debt or socioeconomic indicators is not available, the two financial management indicators are averaged and this averaged value is used as a single indicator with the remaining indicators.

Guidance Documentation		
Component	***Section***	***Page***
Calculating Secondary Test Score	2.4	2-11
Interpreting Secondary Test Score	2.4	2-11
Missing Indicators	2.4	2-12
Determining Need for Widespread Analysis	2.5; Figure 2-1	2-12; 2-14

Conclusion for Community
Description: This matrix evaluates the likelihood of substantial economic impacts due to implementation of the pollution control costs. See the Guidance documentation below for additional information. **Instructions:** Evaluate the combined results of the MPS and the secondary test by noting which cell in the Substantial Impacts Matrix below is highlighted in **orange** and **marked with an asterisk (*)**. If the matrix indicates the pollution control project is not likely to impose a substantial economic impact on the community, do not continue to the widespread analysis. If the matrix indicates the pollution control project is likely to impose a substantial economic impact on the community, continue to the widespread analysis. If the matrix indicates the pollution control project may or may not impose a substantial economic impact on the community, continuing to the widespread analysis is optional.

Assessment of Substantial Impacts Matrix (Table 5-2 from the Guidance)

MPS: 1.1%
Secondary Test Score: 2.3

Secondary Test Score	MPS		
	Less than 1.0 Percent	Between 1.0 and 2.0 Percent	Greater than 2.0 Percent
Less than 1.5	?	X	X
Between 1.5 and 2.5	✓	? *	X
Greater than 2.5	✓	✓	?

Key:
✓ : Impact is not likely to be substantial
X : Impact is likely to be substantial
? : Impact is unclear

Guidance Documentation		
Component	***Section***	***Page***
Using Substantial Impacts Matrix	2.5	2-12
Determining Need for Widespread Analysis	2.5; Figure 2-1	2-12; 2-14

Qualitative Description of Estimated Change in Socioeconomic Indicators Due to Pollution Control Costs (Worksheet M in the Guidance)
Description: This worksheet indicates whether the substantial economic impacts will also be widespread. The EPA considers substantial economic impacts to be widespread if they will have significant adverse impacts on the local community. See the Guidance documentation below for additional information. **Instructions:** Enter information in the **cells marked with an asterisk (*)** to determine if the substantial economic impacts would result in widespread adverse economic impacts to the local community. Because there are no standard economic tests or benchmarks that evaluate socioeconomic impacts for the widespread demonstration, describe the relative changes in indicators such as unemployment, the local economy, household income, tax revenues, indirect effects on other businesses, and sewer fees. This worksheet will help collect and organize the types of information that can be used to determine and demonstrate whether substantial economic impacts will also be widespread.

Estimated change in Median Household Income (MHI)		*
Estimated change in the unemployment rate		*
Estimated change in overall net debt as a percent of full market value of taxable property		*
Estimated change in % of households below the poverty line		*
Impact on commercial development potential		*
Impact on property values		*

Guidance Documentation		
Component	***Section***	***Page***
Determination of Widespread Impacts	4	4-1

Defining Relevant Geographic Area	4.1	4-1
Criteria for Evaluating Widespread Impacts	4.2	4-2
Secondary Impacts to Community	4.2	4-3
Multiplier Effect	4.4	4-5
Economic Benefits of Clean Water	4.5; Appendix C	4-6; Appendix C

Calculation of Total Annualized Project Costs (Worksheet B in the Guidance)
Description: This worksheet displays the total annualized project costs. This worksheet is for informational purposes only. No input is required.

A. Capital Costs		
Capital Cost of Project	$4,224,089,791	
Other One-Time Costs of Project (please list, if any):		
0	$0	
0	$0	
0	$0	
Total Capital Costs (sum column)	$4,224,089,791	(1)
Portion of Capital Costs to be Paid with Grant Monies	$0	(2)
Capital Costs to be Financed [(1) - (2)]	$4,224,089,791	(3)
Type of Financing (e.g., G.O. bond, revenue bond, bank loan)	General Obligation Bond	
Interest Rate for Financing	4.75%	(i)
Time Period of Financing (in years)	32	(n)
Annualization Factor = $i/((1+i)^n - 1) + i$	0.0614	(4)
Annualized Capital Cost [(3) × (4)]	$259,398,373	(5)

B. Operating and Maintenance Costs		
Annual Costs of Operation and Maintenance (including but not limited to: monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement; list below).		
0	$32,835,646	
0	$0	
0	$0	
0	$0	
0	$0	
Total Annual O & M Costs (sum column)	$32,835,646	(6)

C. Total Annual Cost of Pollution Control Project		
Total Annual Cost of Pollution Control Project [(5) + (6)]	$292,234,018	(7)

Guidance Documentation		
Component	***Section***	***Page***
Capital Cost	2.1a	2-3
Financing	2.1.b	2-4
Interest Rate for Financing	2.1.b	2-4
Debt	2.1.b	2-4
Total Annual Cost of Pollution Control	2.1.b	2-5

Calculation of Total Annual Pollution Control Costs Per Household (Worksheet C)

Description: This worksheet displays the total annual pollution control costs per household calculated from data entered in other spreadsheets. This worksheet is for informational purposes only. No input is required.

If the option in the tab named "2. MPS Inputs" indicates that households will provide revenues for the pollution control project in the same or different proportion that they support existing pollution control (choice a or b), then the spreadsheet uses **Worksheet C** parts A, B, and C. However, if households pay based on flow (choice c), then the spreadsheet uses **Worksheet C** part A and **Worksheet C: Option A**.

A. Current Pollution Control Costs

Total Annual Cost of Existing Pollution Control	$1,660,664,499	(1)
Amount of Existing Costs Paid by Households	$1,660,664,499	(2)
Percent of Existing Costs Paid by Households	100.00%	(3)
Number of Households *	3,128,246	(4)
Annual Cost Per Household [(2)/(4)]	$530.86	(5)

* Do not use number of hook-ups.

B. New Pollution Control Costs

Will households provide revenues for the new pollution control project in the same proportion that they support existing pollution control?

X	a) Yes [fill in percent from (3)]	100.00%	(6a)
	b) No, they will pay	100.00%	(6b)
	c) No, they will pay based on flow. (Continue on Calculation of Total Annual Pollution Control Costs Per Household Based on Flow.)		
	Total Annual Cost of Pollution Control Project [Line (7), **Worksheet B**]	$292,234,018	(7)
	Proportion of Costs Paid by Households [(6a) or (6b)]	1.00	(8)
	Amount to be Paid by Households [(7) × (8)]	$292,234,018	(9)
	Annual Cost per Household [(9)/(4)]	$93.42	(10)

C. Total Annual Pollution Control Cost per Household

Total Annual Cost of Pollution Control Project per Household [(5) + (10)]	$624.28	(11)

Calculation of Total Annual Pollution Control Costs Per Household Based on Flow (Worksheet Q: Option A)		
A. Calculating Project Costs Incurred by Households Based on Flow		
Total Usage of Project (e.g., MGD for wastewater treatment)	0.0	(1)
Usage Due to Household Use (MGD of household wastewater)	0.0	(2)
Percent of Usage Due to Household Use [(2)/(1)]	0.00%	(3)
Total Annual Cost of Pollution Control Project	$292,234,018	(4)
Industrial Surcharges, if any	$0	(5)
Costs to be Allocated [(4) - (5)]	$292,234,018	(6)
Amount to be Paid by Households [(3) × (6)]	$0	(7)
Annual Project Cost per Household [(7) / **Worksheet C**, (4)]	$0.00	(8)

C. Total Annual Pollution Control Cost per Household		
Annual Existing Costs per Household [**Worksheet C**, (5)]	$530.86	(9)
Total Annual Cost of Pollution Control per Household [(8) + (9)]	$530.86	(10)

Guidance Documentation		
Component	***Section***	***Page***
Defining Affected Community	2.2	2-5
Adjusting Prior Year's Estimates	2.2	2-5
Impact of Cost Distribution in Community	2.2	2-6
Approaches to Calculating Current Costs	2.2	2-6
Total Annual Cost of Pollution Control Project	2.1.a	2-3
Industrial Surcharges	2.2	2-6

Potential Data Sources for Secondary Test Inputs
Description: This worksheet provides potential sources for the socioeconomic data required to perform the calculations in this spreadsheet. This worksheet is for informational purposes only. No input is required.

Indicator	Potential Data Source
Direct Net Debt	Community Financial Statements
Overlapping Debt	Community Financial Statements
Market Value of Property	Community Financial Statements. If community-specific information cannot be found, median property values by state can be found through American Community Survey Reports: http://www.census.gov/prod/2009pubs/acsbr08-6.pdf Combine data with the number of properties in the community.
Bond Rating	Standard and Poor's or Moody's
Community Unemployment Rate	U.S. Department of Labor, Bureau of Labor Statistics: Local Area Unemployment Statistics: http://www.bls.gov/lau/#tables
National Unemployment Rate	U.S. Department of Labor, Bureau of Labor Statistics: Labor Force Statistics from the Current Population Survey: http://data.bls.gov/timeseries/LNS14000000
Community Median Household Income	U.S. Census Bureau: State & County QuickFacts (select state, then county or city within state): http://quickfacts.census.gov/qfd/index.html
State Median Household Income	U.S. Census Bureau: State Median Income: http://www.census.gov/hhes/www/income/data/statemedian/
Property Tax Collection Rate	Community Financial Statements. If community-specific information cannot be found, statewide data can be found at the U.S. Census Bureau's Quarterly Summary of State & Local Taxes: http://www.census.gov/govs/qtax/
Property Tax Revenues	Community Financial Statements. If community-specific information cannot be found, statewide data can be found at the U.S. Census Bureau's Quarterly Summary of State & Local Taxes: http://www.census.gov/govs/qtax/ Scale according to size of community relative to state.

Example Data Sources for Secondary Test Inputs
Description: This worksheet provides two specific examples of where socioeconomic data required to perform the calculations in this spreadsheet may be obtained for two communities. This worksheet is for informational purposes only. No input is required.

Indicator	Example Data Sources for Fairfax County, Virginia	Example Data Sources for Brookings County, South Dakota
Direct Net Debt	Fairfax County's 2011 Comprehensive Annual Financial Report (CAFR) is available from the county's Finance website: http://www.fairfaxcounty.gov/finance/cafr.htm It provides detailed financial information for the county's primary government, including debt (page 20).	The Community Financial Statement is not available online; however the financial statements were audited in 2010 for the year ending in December 2009, and the audit report is available online: http://legislativeaudit.sd.gov/Reports/County/Brookings%20County%202009.pdf As such, the 2009 financial data, including debt, from 2009 can be used.
Overlapping Debt	Fairfax County's 2011 Comprehensive Annual Financial Report (CAFR) is available from the county's Finance website: http://www.fairfaxcounty.gov/finance/cafr.htm It provides detailed financial information for "component units" such as public schools, park authorities, and others which may be counted as overlapping entities (page 21).	The Community Financial Statement is not available online; however the financial statements were audited in 2010 for the year ending in December 2009, and the audit report is available online: http://legislativeaudit.sd.gov/Reports/County/Brookings%20County%202009.pdf This includes financial data on component units. As such, the 2009 financial data, including debt, from 2009 can be used.
Market Value of Property	Fairfax County's 2011 Comprehensive Annual Financial Report (CAFR) is available from the county's Finance website: http://www.fairfaxcounty.gov/finance/cafr.htm It provides detailed financial information for the county, including an additional statistical section which shows the assessed value of all taxable and nontaxable property in the county (page 246).	The Community Financial Statement is not available online; however, the state of South Dakota provides a recapitulation of property tax statistical information, and Brookings County has links to those documents available on its property tax website: http://www.state.sd.us/drr2/propspectax/property/publications.htm (page 60 contains the relevant information on the market value of property, as well as the property tax collection).
Bond Rating	Fairfax County's 2011 Comprehensive Annual Financial Report (CAFR) is available from the county's Finance website: http://www.fairfaxcounty.gov/finance/cafr.htm provides the county's credits cores from both Standard and Poor's and Moody's (page XVII).	Standard and Poor's: http://www.standardandpoors.com/ratings/en/us/ Allows a search of government entities (by state under "Public Finance U.S.) to registered users (at no cost) and provides a summary of credit issuances and their associated ratings.
	The American Factfinder: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml	The American Factfinder: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

Community Unemployment Rate	Allows the user to find specific census data sets. To identify the community unemployment rate for Fairfax County, select the topic "People:Income/Earnings (Households)"; narrow the geography to Fairfax County, Virginia; and within the Search results, search for: DP03: Selected Economic Characteristics.	Allows the user to find specific census data sets. To identify the community unemployment rate for Brookings County, select the topic "People:Income/Earnings (Households)"; narrow the geography to Brookings County, South Dakota; and within the Search results, search for: DP03: Selected Economic Characteristics.
National Unemployment Rate	The Bureau of Labor Statistics provides national unemployment rate: http://data.bls.gov/timeseries/LNS14000000	The Bureau of Labor Statistics provides national unemployment rate: http://data.bls.gov/timeseries/LNS14000000
Community Median Household Income	The American Factfinder: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml Allows the user to find specific census data sets. To identify the community median household income for Fairfax County, select the topic "People:Income/Earnings (Households)"; narrow the geography to Fairfax County, Virginia; and within the Search results, search for: DP03: Selected Economic Characteristics.	The American Factfinder: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml Allows the user to find specific census data sets. To identify the community median household income for Brookings County, select the topic "People:Income/Earnings (Households)"; narrow the geography to Brookings County, South Dakota; and within the Search results, search for: DP03: Selected Economic Characteristics.
State Median Household Income	The American Factfinder: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml Allows the user to find specific census data sets. To identify the community median household income for Virginia, select the topic "People:Income/Earnings (Households)"; narrow the geography to Virginia; and within the Search results, search for: DP03: Selected Economic Characteristics.	The American Factfinder: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml Allows the user to find specific census data sets. To identify the community median household income for South Dakota, select the topic "People:Income/Earnings (Households)"; narrow the geography to South Dakota; and within the Search results, search for: DP03: Selected Economic Characteristics.
Property Tax Collection Rate	Fairfax County's 2011 Comprehensive Annual Financial Report (CAFR) is available from the county's Finance website: http://www.fairfaxcounty.gov/finance/cafr.htm and provides the county's property tax collection rate on page 247.	The Community Financial Statement is not available online; however the state of South Dakota provides a recapitulation of property tax statistical information, and Brookings County has links to those documents available on its property tax website: http://www.state.sd.us/drr2/propspectax/property/publications.htm (page 60 contains the relevant information on the market value of property, as well as the property tax collection).
Property Tax Revenues	Fairfax County's 2011 Comprehensive Annual Financial Report (CAFR) available from the county's Finance website: http://www.fairfaxcounty.gov/finance/cafr.htm and provides the county's property tax revenue data (page 8).	The Community Financial Statement is not available online; however the state of South Dakota provides a recapitulation of property tax statistical information, and Brookings County has links to those documents available on its property tax website: http://www.state.sd.us/drr2/propspectax/property/publications.htm (page 60 contains the relevant information on the market value of property, as well as the property tax collection).

Changelog

Description: This worksheet describes bug fixes and other modifications that have been made since the original spreadsheet was posted to the EPA web site.

June 2013

On “2. MPS Inputs” and “4. Secondary Test Input” tabs, made minor formatting changes for consistency (bold outline for instruction boxes, and number format in cells F32 and F33)

On “5. Secondary Test Score” and “7. Widespread Impact Analysis,” corrected minor formatting issues (cell borders)

Unlocked cell B17 (description of missing data) in “4. Secondary Test Inputs”

Fixed minor formatting issues for printer compatibility on several tabs

Fixed two typos in cells B20 and B21 in “Purpose and Instructions”

July 2015

Changed calculation of average in "5. Secondary Test Score" to reflect replacement of two financial management indicators with a single average financial management indicator when one debt or socioeconomic indicator is unavailable.